

Hydration & Hydration: Help or Hype?

***By Lt. Michael Mero, MS, RD
Nutrition Management Department***

The sun is brilliantly shining, summer has officially begun....but when you open your door, you might as well be walking into the oven! While the temperature is climbing into triple digits, you are active outside, and yes, even moving; it is important to stay well hydrated.

During these high temperature months, both children and adults are at increased risk for developing heat-related illnesses. The human body is comprised of 50-75% water (about 10-12 gallons), so replenishing your body's water supply is critical for proper body function (i.e. maintaining adequate blood volume and energy levels).

Most people should consume 8-12 cups per day. However, the exact amount depends on your activity level, the outdoor temperature, and your body composition. If you are working, exercise, or playing outside, your hydration needs are higher. In addition, if you have more muscle than fat, you also need more liquid. And, of course, with hot days, the need further increases.

One quick estimation of hydration is the color of your urine. You want your urine to be pale to colorless. Other signs of dehydration are dry mouth, light-headedness, headache, fatigue, or muscle cramps. If symptoms are more severe – shortness of breath, increased body temperature, nausea, or incoherence; seek medical help immediately.

So, I bet you are asking yourself – why is a Dietitian writing about hydration? The answer is simple – there are recommendations as to what is the best type of beverage to consume: Water or other beverages.

Water vs. Other Beverages

Plain water is often not enough for proper hydration. An accumulation of research shows that sports drinks are better for maintaining hydration than drinking water alone. Water turns on the kidneys prematurely so you lose fluid in the form of urine much more quickly. The sodium content in a sports drink allows your body to hold onto the fluid you consume. Also, water does not provide energy (in the form of carbohydrates) which may be needed if you are exercising, playing, or working outside all day.

The small intestine is well designed for fluid and nutrient absorption. Once absorbed, fluids and nutrients are circulated by the bloodstream to the body's muscles and organs. The speed at which a beverage travels from the stomach into the small intestine depends on the calories and volume of beverage consumed.

Carbonated/sweetened sodas and fruit juices contain higher sugar contents (10% or more carbohydrate concentration). The higher sugar content slows fluid absorption and may

cause stomach upset. Research shows that the 6% carbohydrate concentration in most sports drinks (like Gatorade) is optimal for rapid fluid replacement and improved performance.

Therefore, the consumption of a sports drink has been shown to be more beneficial to one's health than just plain water. The outline below shows why sports drinks are more beneficial:

Water:

Flavor- Lack of flavor keeps you from drinking enough to fully re-hydrate

Carbohydrate - Provides no energy to enhance performance

Electrolytes: Sodium and Potassium – 1) Contains no sodium so water stimulates kidneys too soon so your body excretes the fluid faster 2) Does not replace electrolytes

Sports Drinks:

Flavor - Has light flavoring which encourages people to drink more so they fully re-hydrate

Carbohydrate - Contains carbohydrate to provide energy to working muscles

Electrolytes: Sodium and Potassium – 1) Contains a small amount of sodium which helps keep fluid in your system rather than losing it through urination 2) Replaces electrolytes lost in sweat

Children and Hydration

It is of the utmost importance to monitor your hydration, but also the hydration of your children. Compared with adults, children produce more heat relative to body mass during activities such as walking and running, they have a low sweating capacity, and their body core temperature rises at a higher rate during dehydration.

Here are some tips to help protect your children from the heat and dehydration:

- Encourage them to drink fluids (a combination of sports drinks and water) before, during, and after sports and activities.
- Whether it is extremely hot or not, have your children drink on a schedule (approximately every 15-20 minutes during physical activity) because dehydration begins before they are thirsty.
- Make drinking fun by giving your child a squeeze bottle filled with a chilled beverage. To keep beverages cold, freeze half of the fluid the day before and then add the rest on the day of activity.

Further Hot Weather and Fluid Recommendations

Adequate fluid replacement helps maintain hydration and, therefore, promotes the health, safety, and optimal physical performance. Below are some recommendations to decrease the risk of dehydration and heat-related illness:

- Allow for adaptation to the hot conditions. Gradually increase activities over a 10-14 day period. This helps train your body to drink more, increase blood volume, and sweat more efficiently.
- Wear loose-fitting, light-colored clothing to help promote heat loss.

- Do strenuous activity in the early morning or late evening.
- Monitor hydration status. Ideally, body weight should be taken before and after exercise and activities to determine the sweat loss. Check the color of your urine as well.
- Consume a nutritionally based diet and drink adequate fluids 24 hours before your activity.
- Drink 2 cups of fluid 2 hours before exercise to promote adequate hydration.
- During exercise, start drinking early and at regular intervals in an attempt to consume fluids at a rate sufficient to replace water and electrolytes lost through sweating (1 cup every 10-20 minutes).
- After exercise, drink 3 cups per pound of body weight lost through sweat.
- Ingested fluids should be cooler than 72°F (room temperature) and flavored (sports drinks) to enhance the taste and increase consumption.
- Avoid carbonated beverages and fruit juices before and during and after exercise.

Hopefully this article opened your eyes to the importance of proper hydration while living out here in Twentynine Palms. If you follow the recommendation in this article during these increased temperatures, you will have a safe, fun, and healthy summer!